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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,997	07/12/2001	Edwin I. Bernard	LIT3-B045	2238

7590

12/04/2002

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EXAMINER

ZEADE, BERTRAND

ART UNIT PAPER NUMBER

2875

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,997

Applicant(s)

BERNARD, EDWIN I.

Examiner

Bertrand Zeade

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara et al. (U.S.6,231,200) in view of Abileah (U.S.6,111,622).

Shinohara ('200) discloses a surface light source device, elements therefor and apparatus using the same having:

Regarding claim 1, an array of LEDs disposed alongside the LCD (104) for providing illumination thereof (col. 10, lines 18-22); light pipe or light conducting plate (52) for transmitting light from the array of LEDs across a plane parallel with the LCD (104); and a filter disposed between the array and the light pipe (52) for filtering out light from the LEDs (col. 20, lines, 15-29).

Regarding claim 2, the array of LEDs (40) includes LED (col. 20, lines, 15-29).

Regarding claim 3, the array of LEDs includes only blue light (col. 20, lines 15-29).

Regarding claim 4, the array of LEDs includes only green light (col. 20, lines 15-29).

Regarding claim 5, a pair of LEDs array disposed on two sides of the light pipes or transparent plate (see fig. 16 and col. 10, lines 18-22).

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Regarding claim 7, a pair of LED arrays (see fig. 16 and col. 10, lines 18-22) disposed alongside the LCD (104) for providing illumination thereof; light pipe or light conducting plate (52) for transmitting light from the array of LEDs (see fig. 16 and col. 10, lines 18-22) across a plane parallel with the LCD (104); and a filter disposed between the array and the light pipe (52) for filtering out light from the LEDs (col. 20, lines, 15-29).

Regarding claim 8, the array of LEDs includes only red light (col. 20, lines 15-29).

Regarding claim 9, the array of LEDs includes only blue light (col. 20, lines 15-29).

Regarding claim 10, the array of LEDs includes only green light (col. 20, lines 15-29).

regarding claim 11, activating an array of LEDs of first color adjacent light pipe or conducting plate (52) disposed alongside the LCD (104); and filtering light emitted by the array of LEDs (fig. 71)

Regarding claim 15, activating an array of LEDs of first color adjacent light pipe or transparent plate disposed alongside the LCD (104); and filtering light emitted by the array of LEDs; and switching colors of the LEDs as required by the pilot of the aircraft (col. 20, lines 15-29).

Shinohara ('200) does not disclose an infra-red.

Abileah (622) discloses a day/night backlight for a LCD having:

Regarding claims 1,7,11,15, the filtering infrared light emitted from or by LEDs (see figs. 3-10).

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Regarding claim 6, a pair of infra-red filters (IRF) disposed between each of the array of LEDs and the light pipes (see fig. 5).

Regarding claim 12, the first color is red (see claim 4).

Regarding claim 13, the first color is green (col.10, lines 42-48).

Regarding claim 14, the first color is blue (col.10, lines 42-48).

Regarding claim 16, the step of switching colors further includes switching on only those LEDs red (see claim 4).

Regarding claim 17, the step of switching colors further includes switching on only those LEDs blue light (col.10, lines 42-58).

Regarding claim 18, the step of switching colors further includes switching on only those LEDs green light (col.10, lines 42-58).

It would have been obvious to one of ordinary skill in the art at the time invention was made to utilize the surface light source device, elements therefor and apparatus using the same of Shinohara ('200) with the infra-red disclosed by Abileah for benefit and advantage to provide an infra-red light absorbing filter including in the LCD stack, the infra-red light absorbing filter is repositioned within the LCD stack between the light source, having the advantage of preventing all infra-red light from being emitted from the display in nighttime operation while transmitting the maximum amount of light during the daytime operation.

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3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
4. Lippmann et al. (U.S.5,695,269) discloses a multi-color display lighting by LEDs having LCD display.
5. Shaw et al. (U.S.6,419,372) discloses a compact optical wave-guide system for LED backlighting LCD display having day mode LEDs.
6. Okuda et al. (U.S.6,144,424) discloses a backlighting device having LEDs.
7. Pelka (U.S. 6,007,209) discloses light source for backlighting with series of LEDs.
8. Mori (U.S. 6,288,700) discloses L.E. flat panel device which uses light guide routes to directly send light into a matrix of electronic shutters.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bertrand Zeade whose telephone number is 703-308-6084. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea, can be reached on (703) 305-4939. The fax phone number for the organization where this application or proceeding is assigned is 703-305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

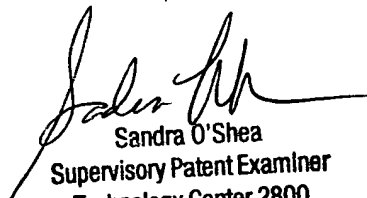
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Examiner: Bertrand Zeade

November 15, 2002.



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800